

**In the Claims:**

1-32. (Canceled)

33. (Currently Amended) A method of modifying the electrophysiological function of a heart of an individual and treating atrial fibrillation or ventricular tachycardia, the method comprising:

(a) providing allogeneic or autogeneic fibroblast~~cells~~ expressing an exogenous voltage-gated or inward-rectifier potassium ion channel polypeptide forming a functional ion channel-; and

(b) implanting said allogeneic or autogeneic fibroblast~~cells~~ into the heart of the individual, such that each implanted cell of said allogeneic or autogeneic fibroblasts ~~cells~~ forms:

(i) gap junctions with at least one cell of the heart; and

(ii) a functional ion channel-;

thereby modifying the electrophysiological function of the heart,

~~wherein the method is utilized for~~ and treating atrial fibrillation or ventricular tachycardia ~~or for creating a pacemaker.~~

34-55. (Canceled)

56. (Currently Amended) The method of claim 33, wherein each implanted cell of said allogeneic or autogeneic fibroblasts forms said functional ion channel following induction.

57-99. (Canceled)

100. (Currently Amended) The method of claim ~~89~~33, wherein said voltage-gated or inward-rectifier potassium ion channel is Kv1.3 or Kir2.1.